



Subject card

Subject name and code	Processing of plastics, PG_00055252						
Field of study	Management and Production Engineering						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2026/2027		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	6	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Institute of Manufacturing and Materials Technology -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Sławomir Szymański					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		4.0		16.0	50
Subject objectives	Acquiring knowledge in the field of polymer materials processing Acquiring knowledge about machines and tools used in the processing of plastics The ability to select machines and devices necessary for the production process of typical plastic products						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W13] has detailed knowledge of the production and operation of machines and devices, diagnosing their technical conditions and selection of regeneration techniques	the student knows the methods of processing polymeric materials the student is able to develop the technological process of manufacturing polymer products	[SW1] Assessment of factual knowledge
	[K6_K02] is able to interact and work in a group, assuming different roles, can inspire and organize the learning process of others, properly identifies priorities for realization of a task specified by themselves or others	The student realizes a given topic in a team, sets goals, analyzes and designs a production stand	[SK2] Assessment of progress of work
	[K6_U07] is able to conduct a preliminary economical analysis of undertaken engineering activities, is able to can conduct a critical analysis and evaluation of existing production processes and courses of selected sections of manufacturing systems, is able to identify the needs of the application of technical solutions for automation and / or robotization production stations and formulate the specifications of the resulting benefits and limitations	the student is able to select a set of machines, tools and devices necessary for the production process for the production process of polymer products	[SU1] Assessment of task fulfilment
	[K6_W08] has basic management knowledge, including process and product quality management, and detailed knowledge of integrated and standardized quality, environmental, health and safety management systems	the student knows the methods of processing polymeric materials the student is able to develop the technological process of manufacturing polymer products	[SW1] Assessment of factual knowledge
Subject contents	1. Characteristics of polymeric materials 2. Physical and chemical methods manufacture of product calenderings from polymers 3. Characteristics and analysis of technological processes: injection moulding, extrusion, plastic pressing, thermoforming calendering, molding plastic, lamination		
Prerequisites and co-requisites	knowledge of materials science		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	60.0%	60.0%
	the presentation	60.0%	20.0%
	raports	60.0%	20.0%
Recommended reading	Basic literature	1. Robert Sikora, Przetwórstwo tworzyw polimerowych, Wydawnictwo Politechniki Lubelskiej, Lublin 2006 2. W. W. Korszak: Technologia tworzyw sztucznych, WNT Warszawa, 1981	
	Supplementary literature	1. Sachtling. Tworzywa Sztuczne - poradnik, WNT Warszawa, 1995	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	1. Graphically represent the steps in the injection molding process 2. Sketch lines for extrusion of pipes 3. List the varieties of plastic casting and describe one of the methods		
Work placement	Not applicable		